TEACHING LITERACY IN TENNESSEE: UNIT STARTER
GRADE 2

DRAFT 10/24/17

Important Note: *The unit starter provides the foundation for unit planning. In addition to thoughtful preparation from these resources, there are additional components of the literacy block for which educators will need to plan and prepare. See page 5 for more guidance on planning for other components of the literacy block.*

This unit starter is being released in draft form to be pilot tested in classrooms across Tennessee. The Tennessee Department of Education is committed to improving this resource to meet the needs of Tennessee educators and students and welcomes feedback on the design and usability of the unit starter. Please share your feedback through our online feedback form here. The department will use this feedback to improve this resource and inform the development of future resources.

TN Department of Education

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GUIDANCE FOR EDUCATORS

1. WHY IS THE DEPARTMENT PROVIDING UNIT STARTERS?

The research is clear: reading proficiently—especially reading proficiently early—prepares students for life-long success. To support greater reading proficiency among all students in Tennessee, Governor Haslam, the First Lady, and Commissioner McQueen kicked off the Read to be Ready campaign in February 2016 with a goal of having 75 percent of Tennessee third graders reading on grade level by 2025. Together, we are making progress. High-quality texts that meet grade-level expectations are increasingly making their way into classrooms. Students are spending more time reading, listening, and responding to texts that have the potential to build both skill-based and knowledge-based competencies. However, the first year of the initiative has revealed a need for strong resources to support the growing teacher expertise in Tennessee.

Earlier this year, the Tennessee Department of Education released Teaching Literacy in Tennessee. This document outlines the types of opportunities students need to become proficient readers, writers, and thinkers and includes a literacy unit design framework describing the ways that teachers can create these opportunities. This includes building rich learning opportunities around meaningful concepts within the English language arts block where students listen to, read, speak, and write about sets of texts that are worthy of students' time and attention. The department is committed to providing continued support to teachers and leaders in implementing this vision for literacy, which is why we are excited to release our Teaching Literacy in Tennessee: Unit Starters for grades K-3.

The resources found in the Teaching Literacy in Tennessee: Unit Starters are intended to support planning for one full unit aligned to the vision for Teaching Literacy in Tennessee. They are intended to serve as a model to reference as educators continue to design units and compare the alignment of lessons to the vision for Teaching Literacy in Tennessee.

2. WHAT RESOURCES ARE INCLUDED IN A UNIT STARTER?

The unit starters include several of the key components in the framework for Teaching Literacy in Tennessee. These components serve as the foundation for strong unit planning and preparation.

Content Goals: Each unit starter begins with content goals that articulate the desired results for learners.

> Universal Concept: A concept that bridges all disciplinary and grade-level boundaries. This concept provides educators and students with an organizational framework for connecting knowledge across disciplines into a coherent view of the world.
>
> > Universal Concept Example: Interdependence
>
> Unit Concept: The application of the universal concept to one or more disciplines. This concept provides students with an organizational framework for connecting knowledge within the disciplines into a coherent view of the world and provides educators with a focus for unit planning.
>
> > Unit Concept Example: Interdependence of living things

Enduring Understandings and Essential Questions: The ideas we want students to understand, not just recall, from deep exploration of our unit concept and the corresponding open-ended questions that will guide students' exploration of these ideas. The enduring understandings reflect the abstract, easily misunderstood, "big" ideas of the discipline. They answer questions like "Why?" "So what?" and "How does this apply beyond the classroom?" to support deep levels of thinking. These questions spark genuine and relevant inquiry and provoke deep thought and lively discussion that will lead students to new understandings. [Adapted from McTighe, J. & Seif, E. (2011), Wiggins, G. & McTighe (2013).]

Enduring Understanding Example: People, plants, and animals depend on each other to survive.
Essential Question Example: Why do human's need to preserve trees?

Disciplinary Understandings and Guiding Questions: Disciplinary understandings are the specific ideas and specialized vocabulary of the discipline. These ideas will focus instruction, build disciplinary knowledge, and provide the schema to organize and anchor new words. Student understanding of these content-related ideas is critical to investigation and understanding of the more abstract and transferable ideas outlined in the enduring understandings. Guiding questions are open ended and guide students' exploration of the disciplinary understanding. These questions prompt ways of thinking and support knowledge building within the content areas.

Disciplinary Understanding Example: The structure of plants and the function of each part
Guiding Question Example: Why are roots important to plants?

Texts for Interactive Read Aloud & Shared Reading: Each unit starter includes a collection of 10-12 complex texts to support strong interactive read aloud and shared reading experiences. These texts have been selected to regularly expose students to rich academic language and build the desired understandings for the unit. Given the complexity of these texts, teachers should revisit them with students after the initial read(s) to deepen knowledge. Teachers also may analyze and select additional suitable texts based on instructional goals and student needs. *See page 38 in* Teaching Literacy in Tennessee *for the three-part model for determining text complexity:* ***quantitative*** *dimensions of text complexity;* ***qualitative*** *dimensions of text complexity; and* ***reader and task*** *considerations.*

The concepts for the first set of unit starters were derived from the vertical progression of Tennessee's Earth Science Standards and focus on Earth's place in the universe:

Kindergarten: There are common, predictable weather patterns associated with each season, and people, animals, and plants respond to these changing weather patterns.

Grade 1: Celestial bodies in the solar system are in motion, resulting in patterns like day and night, the seasons, and the moon's phases.

Grade 2: Some changes in the Earth's surface happen slowly, due to natural processes on the Earth's surface. Others happen suddenly due to incredible forces deep inside the Earth.

Grade 3: Each of the planets in the solar system has its own special path—or orbit—around the sun, resulting in specific characteristics.

Suggested Resources for Small Group & Independent Reading: The unit starters include a list of suggested resources (texts, videos, online resources) to support a volume of reading on the unit concepts. These materials may be used during small group instruction and/or independent reading and writing activities to support

knowledge building for students and to meet students' diverse learning needs.

End-of-Unit Task: Each unit starter includes an end-of-unit task that provides an opportunity for students to demonstrate their understanding of the unit concept and to answer the essential questions for the unit in an authentic and meaningful context.

Daily Tasks & Question Sequences: Each unit starter includes a daily task and question sequence for approximately three weeks of instruction. The question sequences support students in accessing the complex texts during interactive read aloud or shared reading by drawing students' attention to the challenging elements in the text and guiding students toward the desired understandings.

The daily tasks provide a discussion or writing opportunity for students to demonstrate their new understandings using details from the texts read across the daily literacy block. The texts and tasks have been carefully sequenced to support students in building disciplinary understandings over the course of the unit, so they are able to successfully engage in the end-of-unit task.

3. WHAT RESOURCES ARE NOT INCLUDED IN A UNIT STARTER?

These resources provide the foundation for unit planning but are not intended to be a comprehensive curriculum resource. Instead, educators must thoughtfully prepare from the resources that are included in the unit starter and plan for other components of the English language arts block. The unit starters **do not include** instructional guidance to meet the diverse and unique needs of your students, including:

- Instructional guidance for small group and independent reading and writing
    - Students should be grouped flexibly and resources selected to meet specific and unique needs of students, which may change over time.
- Instructional guidance and resources for explicit foundational skills instruction and foundational skills practice in and out of context
    - Reading foundational skills instruction should follow a year-long scope and sequence and be responsive to the unique needs of your students.

Please refer to Teaching Literacy in Tennessee for definitions of new or unfamiliar terms used in this document.

4. HOW SHOULD I USE THE RESOURCES IN THE UNIT STARTER TO PLAN MY UNIT?

The unit starter provides the foundation for unit planning. In addition to thoughtful preparation from these resources, there are additional components of your literacy block for which you will need to plan and prepare.

Interactive Read Aloud and Shared Reading Experiences
To prepare for the unit, start by thoroughly reviewing the resources that are included in the unit starter. These resources are designed to support students in thinking deeply about complex text through interactive read aloud and shared reading experiences and in expressing their understanding through speaking and writing. To support this step, a preparation protocol is included in Appendix A.

Small Group Reading and Writing
In addition to interactive read aloud and shared reading experiences, plan small group instruction to support the diverse needs of students in your classroom. Group students flexibly and select texts to meet your students' specific needs, which may change over time, so they can meet grade-level expectations:

Accuracy/word analysis: Some students may need additional practice with foundational reading skills that have already been taught and now are applied to reading authentic texts.

Fluency: Some students may be strong decoders but still struggle to read fluently, which holds them back from successful comprehension.

Comprehension: Some students may lack the knowledge and vocabulary needed to make sense of what they are reading, struggle to navigate complex sentence structure, or struggle with a particular comprehension strategy.

The unit starters include a list of suggested resources (texts, videos, online resources) that can be used to support small group instruction.

Modeled, Shared and Interactive Writing

To prepare students for success on the daily and end-of-unit tasks in the unit starter, plan for modeled, shared and interactive writing opportunities. Modeled writing is an instructional strategy where the teacher explicitly demonstrates the writing process for different forms and purposes. Shared writing is an instructional strategy where the teacher and students compose a text together with the teacher acting as the scribe. Interactive writing is an extension of shared writing in which the teacher and students compose a text together with the teacher strategically sharing the pen during the process.

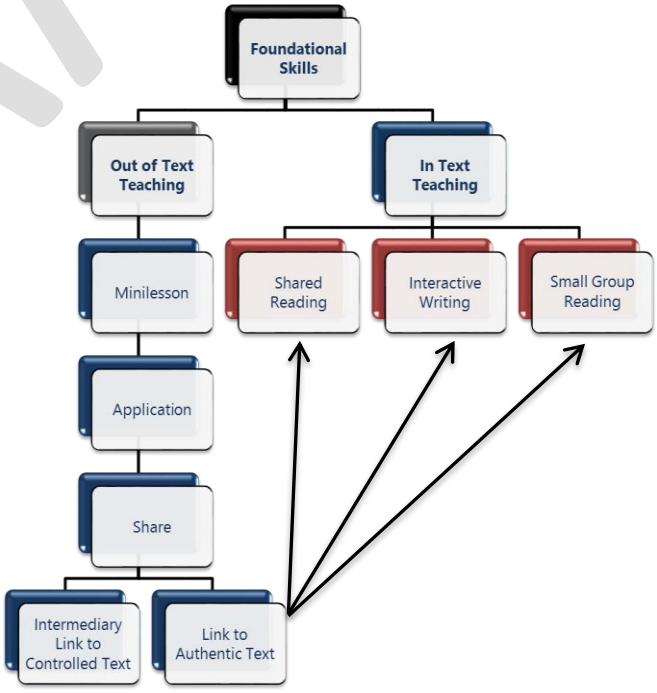
Independent Reading and Writing

The Tennessee English Language Arts Standards call for students to read a range of literary and informational texts and engage in a high volume of reading independently. Plan for how you will use the suggested resources for small group and independent reading to engage students in a volume of reading. Consider setting up systems for accountability during independent work time such as one-on-one conferences, center assignments, and/or accountable independent reading structures.

See pages 41-43 in Teaching Literacy in Tennessee for a description of these instructional strategies and their purpose within the literacy block.

Explicit Foundational Skills Instruction

It is recommended that educators consult the Foundational Literacy Standards and use a systematic phonics sequence (often found within a phonics program) for foundational skills instruction in conjunction with the resources in the unit starter. Strong foundational skills instruction follows an intentional, research-based progression of foundational skills that incorporates phonological awareness, phonics, and word recognition.



Foundational Skills Practice Out of Text and In Text

Strong foundational skills instruction includes opportunities for students to practice their newly acquired skills out of text and in text.

Out-of-text instruction may take the form of minilessons and hands-on application through activities, such as word sorts or the use of

manipulatives.

In-text instruction provides opportunities across the literacy block for students to further apply their new learning in authentic reading and writing texts. Foundational skills assessments should be ongoing and should be used to determine when students have mastered the skill and are ready to move on to the next skill.

See pages 78-79 in Teaching Foundational Skills Through Reading and Writing Coach Training Manual *for more information about the relationship between out of text and in-text teaching.*

Structures for Academic Talk & Collaboration
The unit starters include suggestions for questions and daily tasks, but they do not include guidance on how to structure sharing/discussion time. Consider planning how your students will engage with you and each other when responding to complex text orally or in writing by incorporating things like expectations for talk time, sentence starters, hand signals, etc.

5. WHAT MATERIALS DO I NEED TO ORDER AND PRINT?

Texts for Interactive Read Aloud & Shared Reading
Each of the texts included in the unit starters can be purchased or accessed online. A list of these texts is included in the unit starter materials. Educators will need to purchase or print one copy of each text selected to support interactive read aloud experiences and one copy per student of each text selected to support shared reading experiences (Note: unless you plan to project the text for students to read or purchase a big book option).

Suggested Texts for Small Group & Independent Reading
Additionally, each of the texts suggested for small group and independent reading can be purchased or accessed online.

Materials to Be Printed
The unit starters can be accessed digitally here. Student handouts are included in the appendices for printing. Educators may also consider printing:

- **Question Sequence –** Teachers may want to print question sequences or write the questions on sticky notes to have them available during interactive read aloud and shared reading experiences. Even where page numbers are not indicated in the question sequence, questions are intended to be asked throughout the reading of the text, during the relevant portions of the text.
- **Daily Task –** Teachers may want to print the teacher directions for the daily task.
- **End-of-Unit Task –** Teachers may want to print the teacher directions for the end-of-unit task.

6. WHERE CAN I SHARE MY FEEDBACK ON THE UNIT STARTER?
The Tennessee Department of Education welcomes any feedback you have on the design and usability of the Teaching Literacy in Tennessee: Unit Starters. Please share your feedback through our online feedback from here.

UNIT OVERVIEW

This unit starter is organized around three questions: (1) What are the desired results for learners? (2) How will students demonstrate these desired results? (3) What learning experiences will students need to achieve the desired results?

The diagram on the next page provides a high-level overview of the unit.

Guidance for the central text and lead strategy for each day of instruction has been provided in the unit starter. It is important to note that this guidance does not reflect a comprehensive literacy block. Educators should support students in developing their expertise as readers and writers by flexibly utilizing a variety of instructional strategies throughout the literacy block.

Educators are also encouraged to use the guidance from this unit starter flexibly based on the needs, interests, and prior knowledge of students. For example, teachers may decide to re-read a text, pull in supplementary texts, or provide additional scaffolding based on their knowledge of their students. Teachers are encouraged to be strategic about how many instructional days to spend on this unit.

UNIT OVERVIEW

WHAT ARE THE DESIRED RESULTS FOR LEARNERS?

By the end of this unit students will understand …

Universal Concept: Effects of change

Unit Concept: Earth's natural processes change the Earth's surface.

Enduring Understandings: Some changes in the Earth's surface happen very quickly, due to incredible forces deep inside the Earth. Some changes in the Earth's surface happen over a long period of time, due to slow processes on the Earth's surface.

Essential Questions: Why does the Earth's surface change?

Disciplinary Understandings: The age of the Earth is much greater than our lifespans. The Earth's surface has changed over time. These surface changes have causes.

Guiding Questions: How old is the earth? How does the earth change? Why do we have volcanoes, earthquakes, mountains, etc.?

HOW WILL STUDENTS DEMONSTRATE THESE DESIRED RESULTS?

Students will synthesize their learning from the unit texts and demonstrate understanding in the following authentic and meaningful context …

End-of-Unit Task:

Instructions: You and some friends came across this website while researching the Earth. The website tells readers Earth never changes.

Write an informational letter to the webmaster to explain how the Earth changes and if those changes happen quickly or over a long period of time.

You and your classmates will discuss your letter and your evidence from the text.

Next, you will present your information to a neighboring class to teach them to check their sources carefully.

WHAT LEARNING EXPERIENCES WILL STUDENTS NEED TO ACHIEVE THE DESIRED RESULTS?

Students will build the desired understandings with deep exploration of complex texts through interactive read-aloud (IRA) and shared reading (SR) experiences …

Day 1 (IRA): *Planet Earth/Inside Out*

Day 2 (SR): *How Mountains are Made*

Day 3-5 (IRA): *Volcanoes*

Day 6 and 7 (IRA): *How Does It Happen? How does a Volcano Become an Island?*

Day 8 (SR): *An Island Grows*

Day 9 and 10 (IRA): *Earthquakes*

Day 11 and 12 (SR): *Cracking Up: A Story About Erosion*

Day 13 (IRA): *Rocks: The Hard Facts, Erosion and Weathering*

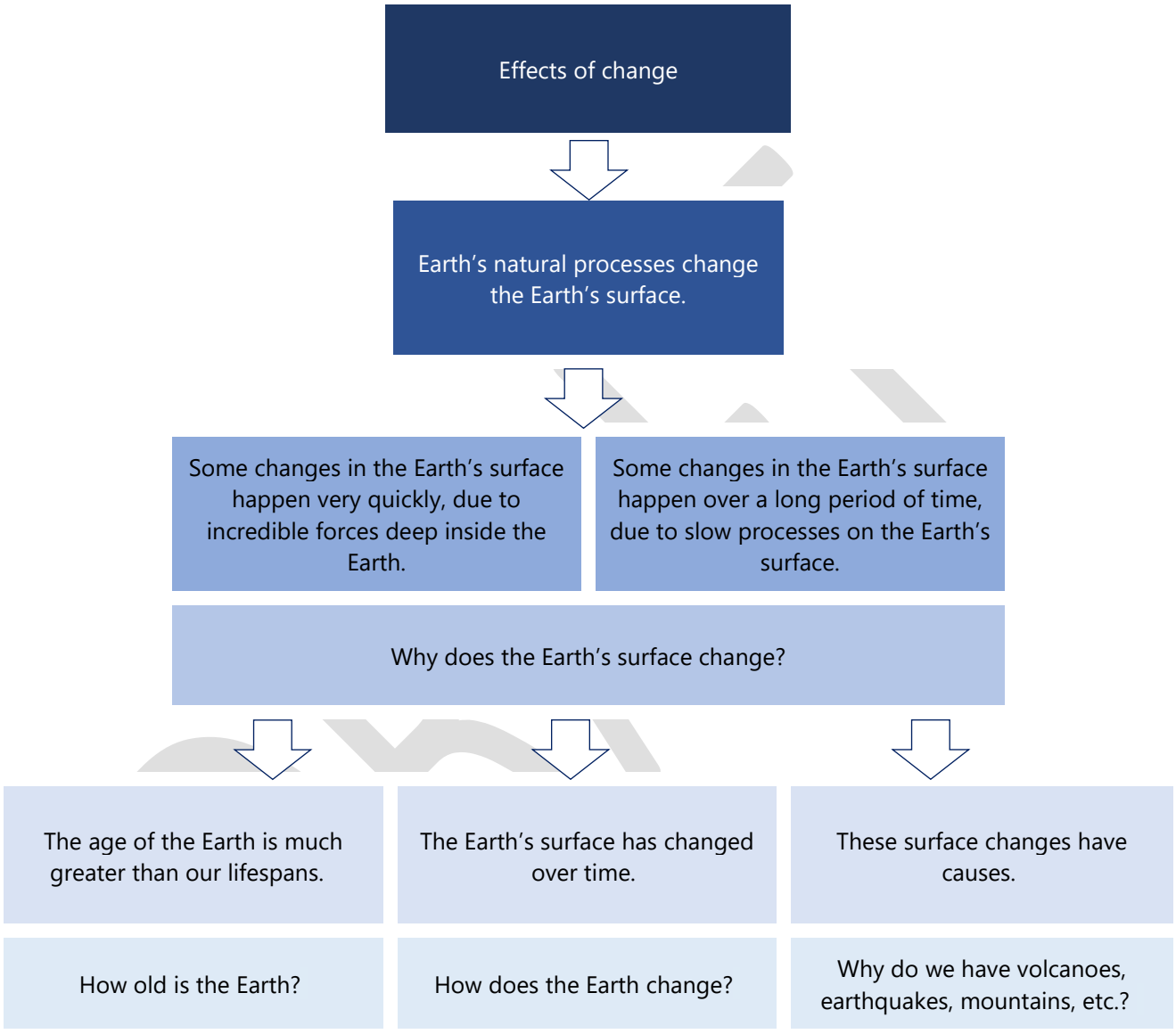
Day 14 (IRA): *Planet Earth/Inside Out*

Day 15-16: End-of Unit Task

Note that even though days and instructional strategies are listed above to lead the day's instruction, teachers will normally couple multiple instructional strategies in concert (see page 13 of *Teaching Literacy in Tennessee)*. It is also assumed that teachers will re-read a text on subsequent days as needed, pull in supplementary texts, or provide additional scaffolding based on their knowledge of their students. Teachers are encouraged to be strategic about how many instructional days to spend on this unit.

UNIT CONTENT GOALS

By the end of this unit students will have achieved the desired understandings outlined below.



2.ESS1.1: Recognize that some of Earth's natural processes are cyclical, while others have a beginning and an end. Some events happen quickly, while others occur slowly over time.

UNIT STANDARDS

The questions and tasks outlined in this unit starter are aligned with the following Tennessee English language arts and science standards.

ALIGNED STANDARDS: INFORMATIONAL TEXT

2.RI.KID.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

2.RI.KID.2 Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within a text.

2.RI.KID.3 Describe the connections between a series of historical events, scientific ideas, or steps in a process in a text.

2.RI.CS.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

2.RI.CS.5 Know and use various text features to locate key facts or information in a text efficiently.

2.RI.CS.6 Identify the main purpose of a text, including what an author wants to answer, explain, or describe.

2.RI.IKI.7 Identify and explain how illustrations and words contribute to and clarify a text.

2.RI.IKI.9 Compare and contrast the most important points presented by two texts on the same topic.

2.RI.RRTC.10 Read and comprehend stories and informational texts throughout the grades 2-3 text complexity band proficiently, with scaffolding at the high end as needed.

ALIGNED STANDARDS: LITERATURE

2.RL.KID.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

2.RL.KID.2 Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.

2.RL.IKI.7 Use information gained from illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

2.RL.RRTC.10 Read and comprehend stories and poems throughout the grades 2-3 text complexity band proficiently, with scaffolding at the high end as needed.

ALIGNED STANDARDS: WRITING

2.W.TTP.1 Write opinion pieces on topics or texts.

a. Introduce topic or text.
b. State an opinion.
c. Supply reasons to support the opinion.
d. Use linking words to connect the reasons to the opinion.
e. Provide a concluding statement or section.

2.W.TTP.2 Write informative/explanatory texts.

a. Introduce a topic.
b. Use facts and definitions to provide information.
c. Provide a concluding statement or section.

2.W.TTP.3 Write narratives recounting an event or short sequence of events.

a. Include details to describe actions, thoughts, and feelings.
b. Use time order words to signal event order.
c. Provide a sense of closure.

2.W.PDW.4 With guidance and support, produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)

2.W.PDW.5 With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and strengthen writing as needed by revising and editing.

2.W.PDW.6 With guidance and support from adults, and in collaboration with peers, use a variety of digital tools to produce and publish writing.

2.W.RBPK.7 Participate in shared research and writing projects, such exploring a number of books on a single topic or engaging in science experiments to produce a report.

2.W.RBPK.8 Recall information from experiences or gather information from provided sources to answer a question.

2.W.RW.10 With guidance and support from adults, engage routinely in writing activities to promote writing fluency.

ALIGNED STANDARDS: SPEAKING & LISTENING

2.SL.CC.1 Participate with varied peers and adults in collaborative conversations in small or large groups about appropriate 2nd grade topics and texts.

2.SL.CC.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

2.SL.CC.3 Ask and answer questions about what a speaker says in order to gather information or clarify something that is not understood.

2.SL.PKI.4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

2.SL.PKI.6 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

ALIGNED STANDARDS: SCIENCE

2.ESS.1.1 - Recognize that some of Earth's natural processes are cyclical, while others have a beginning and an end. Some events happen quickly, while others occur slowly over time.

TEXTS FOR INTERACTIVE READ ALOUD & SHARED READING

These texts have been selected to regularly expose students to rich academic language and build the desired understandings for the unit. They have been vetted for quality and complexity to support strong interactive read aloud and shared reading experiences.

While preparing for instruction, educators are urged to carefully consider the needs and interests of the readers and to be strategic about the types of tasks that will support readers in deeply engaging with these rich texts. Teachers should also consider how they will make connections to students' prior knowledge and students' cultural and previous academic experiences. Teachers need to consider the vocabulary demands of the text and the level of support readers will need to deeply understand the text. As teachers consider the reader and tasks, additional texts related to the unit concepts, or re-reads of unit texts, will likely need to be added. Some texts are suggested for one read, while others are recommended for multiple or subsequent reads. It is assumed that teachers will make connections across texts as they work through the unit, including during the production of tasks.

TITLE	AUTHOR
Planet Earth/Inside Out	Gail Gibbons
How Mountains Are Made	Kathleen Weidner Zoehfeld
Volcanoes	Seymour Simon
How Does It Happen? How does a Volcano become an Island?	Linda Tagliaferro
Cracking Up: A Story About Erosion	Jacqui Bailey and Matthew Lilly
An Island Grows	Lola M. Schaefer
Earthquakes	Franklyn M Branle
Cracking Up: A Story About Erosion	Jacqui Bailey and Matthew Lilly
Rocks: The Hard Facts, Erosion and Weathering	Willa Dee

SUGGESTED RESOURCES FOR SMALL GROUP & INDEPENDENT READING

These resources can be used to support a volume of reading on the unit concepts. These materials may be used during small group instruction and/or independent reading and writing activities to support knowledge building for students and to meet students' diverse learning needs.

TITLE (TEXTS, VIDEOS & ELECTRONIC RESOURCES)	AUTHOR
CKLA Grade 2, Unit 6: Cycles in Nature	Core Knowledge Language Arts Curriculum
Everything Volcanoes and Earthquakes: National Geographic Kids	Kathy Furgang
Magic Tree House: Vacation Under the Volcano	Mary Pope Osborne
Magic Tree House: Earthquake in the Early Morning	Mary Pope Osborne
The Magic School Bus Blows Its Top	Gail Herman and Bob Orstrom
The Magic School Bus Inside the Earth	Joanna Cole and Bruce Degen
The Magic School Bus Volcanoes and Earthquakes	Joanna Cole and Bruce Degen
The Magic School Bus Planet Earth	Tom Jackson
I Can Read About Earthquakes and Volcanoes	Deborah Merrians
National Geographic Kids: Everything Volcanoes and Earthquakes	Kathy Furgang
I Wonder Why Volcanoes Blow Their Tops and other questions about natural disasters	Rosie Greenwood
National Geographic Dirtmeister's Nitty Gritty Planet Earth	Steve Tomecek
The Magic School Bus Science Chapter Book #15: Voyage to the Volcano	Judith Stamper
Dream Jobs: Volcanologist	NewsELA
How the World Works: A Hands-On Guide to Our Amazing Planet (Explore the Earth)	Christian Dorion
Erosion	ReadWorks
The Science of Earthquakes	NewsELA
The Power of the Earth	ReadWorks

Small earthquakes tremble the ground below Mount St. Helens volcano	NewsELA
Dear Katie, The Volcano is a Girl	Jean Craighead George
Earthquakes!	Cecilia Minden
Princess and the Warrior: the Tales of Two Volcanoes	Duncan Tonatiuh
Tornadoes!	Gail Gibbons
The Sky Stirs Up Trouble	Belinda Jensen
The Firework-Maker's Daughter	Phillip Pullman
Volcano Wakes Up!	Lisa Westberg Peters
How the World Works: Explore the Earth	Christian Dorion and Beverley Young

UNIT VOCABULARY

The following list contains vocabulary words from the interactive read aloud and shared reading texts that warrant instructional time and attention. Teachers should attend to these words **as they are encountered in the texts** to build students' vocabulary and to deepen their understanding of the unit concepts. Educators are encouraged to identify vocabulary that might be unfamiliar to students and to determine how they will teach those words (implicit, embedded, or explicit instruction) based on knowledge of their students. See Appendix B for an example routine for explicit vocabulary instruction.

Educators are also encouraged to dedicate a space in their classrooms to record unit vocabulary. This will provide a reference point for the students as they read, write, and talk about the unit topics. Through repeated exposure throughout the unit, students will develop their understanding of these words and will begin to use them in speaking and writing activities.

Active	Erode	Natural resources
Bay	Erosion	Nickle
Canyons	Eruption	Outer core
Churning	Fault	Plate
Cinder cone	Fault lines	Pressure
Climate	Fertile	Ridges
Collide	Forge	Riverbank
Composite cone	Fossil	Sea Level
Continental crust	Inner core	Seabed
Core	Landform	Shield volcano
Cracks	Landscape	Steep
Craggy	Lava	Surface
Crater	Layer	Surge
Crust	Ledge	Tectonic plates
Depressions	Lithosphere	Tide
Destructive	Magma	Tsunami
Dissolve	Magnetic field	Valley
Dormant	Mantle	Vent
Earthquake	Molten	Volcano
Equator	Mountain	Weathered

DAY 1: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Planet Earth/Inside Out* by Gail Gibbons **Iteration:** First Read **Instructional Strategy:** Interactive Read Aloud

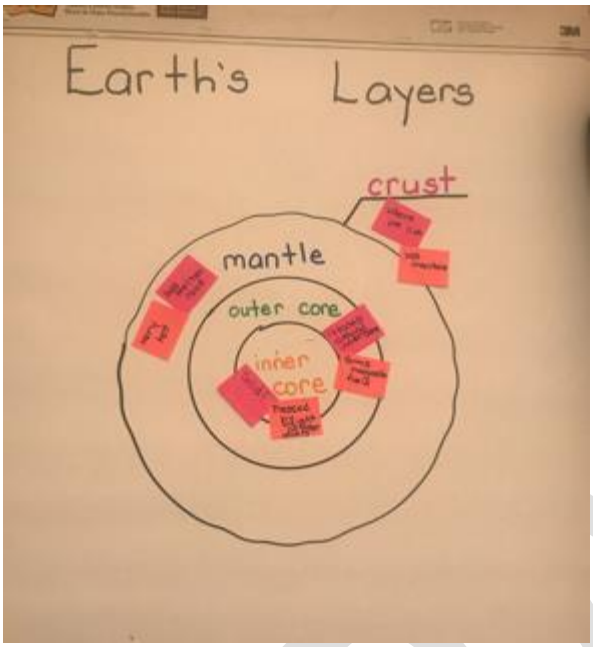
TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
800L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is slightly complex. There are no headings to separate different topics in the text. Some of the illustrations are supplementary, and some are necessary for understanding the text.	Language features are moderately complex. There are some subject-specific words that are defined and then used frequently in the text (equator, magnetic field, mantle, molten, plate, faults). There are some words that may be new or used in new ways (iron, nickel, pressure, strain, buckles, collide, flat plains, depressions, climate, natural resources, abused). Most of the sentences are simple or complex.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is slightly to moderately complex. The title communicates one of the purposes of the text, and the idea that the earth is ever-changing is a big idea that is explicitly repeated throughout the book.	The knowledge demands in this text are slightly complex. Students need to have background knowledge of distance (inches, miles, feet) and temperature. The illustrations and sidebars connect the information in the text to common experiences (water boiling, size of a peach).

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
During this first read of our central text, we want to peak student's interest in our unit while setting the framework for our learning. This read will highlight the fact that the Earth is older than our lifespans and focus on the layers of the Earth.

DAILY TASK
Anchor Chart: The class will create an anchor chart that labels the layers of the Earth. Students will be asked to use stickie notes to add details about each of the layers. **Writing Task:** After the class creates an anchor chart, have students answer the following writing prompt in their journals: What makes each layer of the earth unique? Remind students to introduce the topic, use facts from the text to describe each layer, and provide a concluding statement or section.

EXEMPLAR STUDENT RESPONSE

Class Anchor Chart



Student Anchor Chart

Writing Task

The earth has four layers. In the center of the Earth is the inner core. The inner core is very hot and is made of solid rock. The outer core is the next layer. The outer core moves slowly around the inner core. This gives Earth it's magnetic core. The mantle is the thickest layer. It is made of partially molten rock. Earth's crust is the last layer. Humans live on this layer. All of the layers of the earth are unique.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Pages 2-3	So, while there are lots of different ideas about the age of the Earth, I can learn from these pages that the Earth is much older than I am! Is that a few years or a lot of years? (*Wait for a group answer.*) So, does that mean that the Earth is young or old? (*Wait for a group answer.*)	A lot of years! Old

	From these pages, I wonder if the Earth has always looked the same or if it has changed over time. Do you think the Earth has changed over time? How do you think the Earth has changed? (Think, Pair, Share)	Yes, the Earth looks so different each day. The leaves change color and fall from the trees.
Page 8	Our text shares some fascinating information about our inner core. Remember that the inner core is the central foundation of our Earth. (*Use illustration to point to the inner core.*) Thinking about what you have heard about the inner core, please share with your partner at least one fascinating fact. (*Think, Pair, Share*)	*Possible answers*: • It is hot. • It is made of solid iron and nickel • It is 1, 500 miles across. • It is 50 times hotter than boiling water. The inner core is solid because of the huge weight of the rest of the Earth.
Page 9	While the first layer is named the inner core, what is the next layer named? Can you share at least one interesting piece of information you learned about the outer core? (*Think, Pair, Share*)	Outer core. *Possible answers*: • It is 1,300 miles thick. • It is as far as New York City is from Miami, Florida. • Scientists think it is made up of very hot liquid and nickel. The outer core moves slowly around the inner core making electricity that creates the Earth's magnetic field.
Page 11	As we get ready to learn about the next layer of the Earth, let's review the layers we have studied. (Have students use their hands to name the layers they have learned. As you review, verbally highlight the specific traits of each layer.) Now we know that the mantle and the crust are the last two of Earth's layers. On which layer do we live? (*Wait for a group answer. If students have difficulty inferring that they live on the crust, use the illustration to help prompt their thought process.*)	We live on the Earth's crust. The crust is very thin and made up of rock and soil.

	How would you describe the Earth's crust? (*Again, have students use their hands to name the layers of the Earth. As you review, have the students share specifics they have unearthed*.)	
Page 14	Why is the planet Earth considered a living planet? (*Think, Pair, Share*) Let's take a moment and look at the illustrations on this page. They show some of the ways the Earth is always in motion. How is the Earth in motion in the first image? What did you use to help you know its direction of movement? What do you think will happen because of this motion? (*Quickly continue this cycle with at least two images*.)	The Earth is considered a living planet because it is in constant motion. Answers will vary.
	It is amazing to think that our Earth is in constant motion. I am excited to learn more about what happens when our living planet moves as we learn throughout this unit!	
Page 26	While our text tells that the Earth has changed during our lifetime, we as humans can do some things to help. Share with your partner how we can help the Earth. (*Think, Pair, Share*) *It will be helpful to have discussions around the illustrations on this page to foster conversation.*	Humans can protect the Earth from damage by not abusing natural resources, recycling, etc.

DAY 2: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *How Mountains are Made* by Kathleen Weidner Zoehfeld **Iteration:** First Reading **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
620L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. The illustrations include labels and show characters who have thought bubbles that help explain the illustrations. Some of the illustrations are supplemental, and some are necessary.	Language features are moderately complex. There is some simple and some content-specific vocabulary, and both simple and complex sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is slightly complex. The title provides a clear purpose for the text, which is narrowly focused on how different types of mountains are made.	The knowledge demands required to access this text are slightly complex. To fully understand the text, students need to know about distances/height (inches, feet and miles) and time (hundreds of millions of years).

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
Students will use this shared text to establish background knowledge around processes that slowly change the Earth. This text will introduce students to how mountains are formed.

DAILY TASK

Anchor Chart:

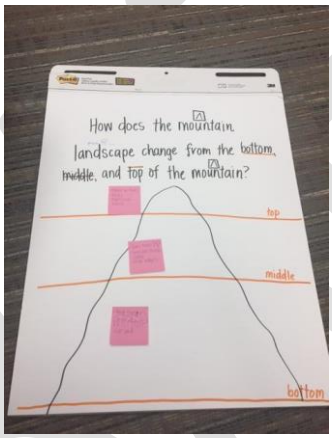
How does the mountain landscape change from the bottom, middle, and top of the mountain? (Use the anchor chart as a class to use text evidence on sticky notes to describe attributes of the mountain landscape).

Writing Task:

After the class creates an anchor chart, have students explain in writing how the mountain was formed.

Remind students to introduce the topic and to provide a concluding statement. Students should also use facts from the text to describe how the mountain was formed and how long the process took.

When students are finished, have them read their writing to a peer. Encourage students to ask questions to clarify their thinking if needed.



EXEMPLAR STUDENT RESPONSE

Anchor Chart:

The student would create a quick list with the following text-based details (See picture of anchor chart above):

Bottom: thick forest, flat land
Middle: some trees, steep, and rock ledges
Top: almost no trees, rocky, and potentially fossils

Writing Task:

After reading the book, *How Mountains are Formed*, I know some mountains are being built now, but some are hundreds of millions of years old. We know this because of the age of the fossils found on the tops of mountains. One way mountains are formed is when plates under the Earth move and cause the Earth to be pushed up. Another way mountains are formed is underwater in the ocean when magma becomes solid, and mountains are built up. It takes a very long time for mountains to form.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 12	The author uses the word "gradually" to explain how mountains are built up and worn down. What other text evidence helps you understand if this means a slow or fast change? What are some ways the Earth is always changing? What text evidence proves your thinking?	Gradually would mean a slow change, because the author explained the mountains changed "over hundreds of millions of years," and the illustration shows small changes in the mountain with the small mountain forming over a long time (the flying prehistoric animals are a clue it happened a long time ago). From the word and illustration evidence, the Earth is always changing by: • Mountains going away • Mountains being worn away by wind, ice, and rain • New mountains forming
Page 15	How do scientists believe mountains were formed?	Most scientists believe that all mountains on Earth were formed by slow movements in the Earth's outer shell.
Pages 16-17	Why do mountains look different?	Mountains look different because Earth's outer shell moves in different ways.
Pages 17-21	Turn & Talk: How are mountains formed?	Mountains can be formed when pressure below the Earth causes plates to move, so the ground is pushed up. Another way mountains are formed is underwater in the ocean when magma becomes solid, and mountains are built up.
Pages 24-25	What text evidence do we have about the age of the Earth, fossils, and mountains?	Some mountains are being built now, but some are hundreds of millions of years old. We know this because of the age of the fossils found on mountains. The text also tells us that fossils were buried in the ocean before the mountain was born. That's how the fossils were found at the top of the mountain today.

Page 27	Why are the mountains lower and smoother? Was that a fast change or a slow change?	The mountains are lower and smoother because for millions of years rain, wind, and ice have worn them down, causing a slow change.
Page 28	Why will the mountains be worn down completely? Will this be a quick or slow change?	In the text the author says rain, wind, and ice will have worn down the mountains. We also can see in the illustration that is labeled "millions of years from now," there are no mountains.

ADDITIONAL SUPPORTS
To support students in making connections from the day 1 text, reread this selection from the anchor text *Planet Earth Inside Out* by Gail Gibbons before reading the text: "The shape of the land, like that of the ocean floor, has formed over millions of years. Great forces have worked to make this happen. When plates crashed into one another, they made the layers of continental crust fold and buckle to form mountain ranges. And when plates pulled apart, they formed depressions in the continental crust called rift valleys. Vast ice sheets called glaciers, also changed the Earth's surface. They pushed down over the land, shaping and forming it into valleys, plains, and hills. Most of these changes happen too slowly for people to see."

DAY 3: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Volcanoes* by Seymour Simon **Iteration:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
880L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. There are few informational text features, and the photographs are typically described in the text. Some of the photographs are helpful, and some are necessary for understanding the text.	Language features are moderately complex. Some of the words are unfamiliar, subject-specific, or used in new ways (forge, vent, crater, churn, advancing, margins, eruption, weathered, ash, cinders, steep, summit, predecessor). There is some figurative language (she burst forth, awakened from its long sleep, volcanoes are dead, a blanket of pumice and ash). There is a mixture of simple, complex, and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is moderately complex. The text covers a range of topics related to volcanoes including early history of volcanoes, how volcanoes are made, recent examples of active volcanoes, and the impact of eruptions.	The knowledge demands presented by this text are moderately complex. This text requires students to have basic knowledge about volcanic eruptions, the connection between volcanos and earthquakes, and earth's internal forces. Students also need to know about measurement, including time and distance (a century, 19th century, million years, thirty thousand feet, mile, acre). Students need to recognize the names of different places and groups of people (Norse, Hawaiians, early Romans, Iceland, Washington, native Americans, early settlers, the northwest, California, Oregon).

TN Department of Education

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
Read pages 1-13 of the text on day 1. The purpose is to understand the sequence of events for a volcanic eruption, add content-specific vocabulary to students' lexicon, and verbalize the effects of the eruption on Earth's surface. Volcanoes are formed when magma pushes its way up through the cracks in Earth's crust and piles up around the vent. When magma spills out on the surface of the Earth, it's called a volcanic eruption. Volcanic eruptions produce an enormous amount of energy and are highly destructive.

DAILY TASK
Writing Task: Using details from the text, illustrations, and content-specific vocabulary, the students will draw a picture of a volcano and explain, in writing, the formation and eruption process of a volcano. Remind students to introduce their topic, to use facts and details from the text, and to include a concluding statement. When students finish, have them share their illustration and writing with a partner.

EXEMPLAR STUDENT RESPONSE
Writing Task: A volcanic eruption occurs when magma pushes up through the holes or cracks in Earth's surface. Once magma comes out, it's called lava. The eruption is when lava comes out of the vent and piles up around the vent. The eruptions cause the Earth's surface to change, because it has a bunch of energy and causes destruction all around. Ash spouts into the air and settles on the ground. The eruption can cause earth's surface to swell and crack.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 6	Using what we just read, and what you know from reading *Planet Earth: Inside Out*, what is the earth made of?	Once you go below the soil, Earth is made of layers of rocks. The earth is made up of the inner core, outer core, magma, and the crust.
Page 6	What is magma?	Some rocks inside the center of Earth are so hot they are melted. Magma is the

		melted (molten) rock deep inside of Earth and a volcano.
Page 6	What is the difference between magma and lava?	We know magma is the melted rock inside a volcano. When the magma comes out of the volcano, it's called lava.
Page 6	How is a volcano formed? What is a volcanic eruption?	A volcano is formed when magma pushes its way up through cracks in the earth's crust. When the hot lava comes out of the surface of the earth, it's called a volcanic eruption.
Page 7	What do you see in this picture? Why does the author include photographs of different volcanoes and the large cloud of ashes?	I see hot lava came out of one volcano, and one volcano shot hot ashes all through the air with lots of force. The author puts photographs in the book to help us understand that all volcanoes don't look alike. He showed us how hot lava came out of one volcano, and one volcano shot hot ashes all through the air with lots of force.
Page 7	What does that picture tell you about the effect of a volcanic eruption on animals, plants, and people?	Volcanoes can shoot out different things. Seeing how red hot it was made me think the hot lava would burn and destroy any plants it touches. It would also kill animals and people it touched, because it would burn them. Since there are different kinds of volcanic eruptions, I can see how people would be hurt and covered by hot ashes too.
Page 8	What does vent mean in this context? (*Share the definition if students don't answer.*) How is a volcano formed?	The vent is the crack in the crust where magma bursts out. A volcano is formed by erupted material that piles up around the vent.
Page 10	Using information from the text and from the illustration, explain how the eruption of Mount St. Helens impacted the earth's surface.	The eruption of Mount St. Helens impacted the earth's surface by causing earthquakes and by spouting steam and ash into the air and onto the land. The mountain also swelled and cracked because of the volcanic eruption.

Page 12	What does destructive mean? In pairs, discuss some examples of this question. How was the eruption of Mount St. Helens destructive?	Destructive is a description of how much damage something causes. Something that is destructive means it harms or breaks something. The eruption of Mount St. Helens killed and hurt people, animals, and plants.
Page 13	How is Mount St. Helens different after it erupted?	The eruption changed the life of living things on and around the mountain, and it changed the shape of it.

DAY 4: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Volcanoes* by Seymour Simon **Iteration:** Second Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
880L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. There are few informational text features, and the photographs are typically described in the text. Some of the photographs are helpful, and some are necessary for understanding the text.	Language features are moderately complex. Some of the words are unfamiliar, subject-specific, or used in new ways (forge, vent, crater, churn, advancing, margins, eruption, weathered, ash, cinders, steep, summit, predecessor). There is some figurative language (she burst forth, awakened from its long sleep, volcanoes are dead, a blanket of pumice and ash). There is a mixture of simple, complex, and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is moderately complex. The text covers a range of topics related to volcanoes including early history of volcanoes, how volcanoes are made, recent examples of active volcanoes, and the impact of eruptions.	The knowledge demands presented by this text are moderately complex. This text requires students to have basic knowledge about volcanic eruptions, the connection between volcanos and earthquakes, and earth's internal forces. Students also need to know about measurement, including time and distance (a century, 19th century, million years, thirty thousand feet, mile, acre). Students need to recognize the names of different places and groups of people (Norse, Hawaiians, early Romans, Iceland, Washington, native Americans, early settlers, the northwest, California, Oregon).

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH

Read pages 14–25 on day 2.

The purpose of this second read is to apply previous learning in order to know and understand how volcanoes form, what underwater volcanoes make, and that some lava is slow moving and some moves swiftly.

Volcanoes form where Earth's plates meet and form from erupted materials piling up around the vent.

Underwater volcanoes can rise above sea level and form islands such as Iceland and the Hawaiian Islands.

Thousands of eruptions were needed to build mountains high enough to reach from the deep sea bottom and appear as islands.

DAILY TASK

Writing Task:

After reading the text, have students write a letter to a peer explaining how volcanoes change the earth's surface. Students should provide examples and explain how the change occurs. Students should also explain if the change they describe is a quick or slow change.

Support students in the format of letter writing if needed.

EXEMPLAR STUDENT RESPONSE

Writing Task:

Dear Friend,

I want to share some information with you about volcanoes. Volcanoes can change the Earth's surface in many ways. One way volcanos change the Earth's surface is that they erupt and shoot ash into the air. The ash covers the ground. Another example of how volcanoes change Earth's surface is the creation of islands. Islands are formed when underwater volcanoes erupt and lava hardens. Over time the volcanoes grew so big that they appear above the sea level as islands. Even though it takes a long time for volcanoes to create islands, it is one of the ways volcanoes change the Earth's surface. I hope you find this information as interesting as I do!

Your Friend,

Second Grade Student

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Pages 9-10	On page 9, the author says, "[…] settlers had seen Mount St. Helens *puff out* some ash, steam, and lava […]." What does *puff out* mean? On page 10, the author says, "[…] Mount St. Helen began to *spout* ash and steam." What does *spout* mean?	Using clues from the sentence and what I already know, I think puff means "bursts out." The author is telling us that ash, steam, and lava were bursting out of Mount St. Helens. Now the author is describing how Mount St. Helen spouted ash and steam. Since I know that this is the same mountain and it is doing something to ash and steam, I think spout means burst out, just like puff.
	Why does an author use different language/words to tell us the information?	When I read the words spout and puff, I liked the author using different words because I don't want him to repeat the same words over and over. This would be boring. I think good writers use different words to make this stuff interesting.
	What is the main purpose of this text? What does the author want to explain or describe to you? (the audience)	I think the author wants us to tell us what scientists know about volcanoes. Mr. Simon wants to explain and describe the two main types of Hawaiian lava and how islands are formed. The author also wants us to know that very tall underwater volcanoes can form islands. Because the author wants us to learn this information, he used different words to make learning fun.
Page 14	Where do volcanoes erupt? What is a plate?	They can erupt anywhere, but mostly they erupt where two plates meet. A plate is a term we use to explain the large sheets of rock on the outer crust of earth. The author describes the huge sections or sheets of rock like a cracked eggshell.
Page 15	What is the ocean floor? What is "above sea level?"	The ocean floor is the bottom of the ocean. Sea level is the level of the surface

	How do underwater volcanoes impact the earth's surface? How do you know? What does the author mean when he says, "Iceland is a volcanic island?"	of the sea. So, above sea level means above the surface of the sea. Underwater volcanoes impact the earth's surface by creating islands. This happens when the volcanoes grow so high that they rise from the ocean floor to above sea level. Underwater volcanoes form islands that we can see above the water. The author is telling us the long ago, Iceland was formed by an underwater volcano.
Page 17	How did this volcano impact the people of Heimaey? How did this volcano impact the earth's surface?	It destroyed the town, because hundreds of buildings burned down or were buried in lava. The volcano made the earth change shapes.

ADDITIONAL SUPPORTS
Reread related selections from the anchor text *Plant Earth Inside Out* by Gail Gibbons. Build background knowledge with the following YouTube video: https://www.youtube.com/watch?v=V863xR0Y2qk

DAY 5: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Volcanoes* by Seymour Simon **Iteration:** Third Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
880L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. There are few informational text features, and the photographs are typically described in the text. Some of the photographs are helpful, and some are necessary for understanding the text.	Language features are moderately complex. Some of the words are unfamiliar, subject-specific, or used in new ways (forge, vent, crater, churn, advancing, margins, eruption, weathered, ash, cinders, steep, summit, predecessor). There is some figurative language (she burst forth, awakened from its long sleep, volcanoes are dead, a blanket of pumice and ash). There is a mixture of simple, complex, and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is moderately complex. The text covers a range of topics related to volcanoes including early history of volcanoes, how volcanoes are made, recent examples of active volcanoes, and the impact of eruptions.	The knowledge demands presented by this text are moderately complex. This text requires students to have basic knowledge about volcanic eruptions, the connection between volcanos and earthquakes, and earth's internal forces. Students also need to know about measurement, including time and distance (a century, 19th century, million years, thirty thousand feet, mile, acre). Students need to recognize the names of different places and groups of people (Norse, Hawaiians, early Romans, Iceland, Washington, native Americans, early settlers, the northwest, California, Oregon).

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH

Read page 25–the end on day 3.

For this third and final read, students will apply previous learning to further understand that volcanic eruptions can cause destruction but also bring new mountains, new islands, and new soil to the land.

DAILY TASK

Writing Task:

Using textual evidence and photographs of volcanoes, students will write an informational text, describing how volcanoes affect the surface of Earth, plants, animals, and people.

Remind students to introduce their topic, to use facts and details from the text, use domain-specific vocabulary from the word wall/display, and include a concluding statement.

Students will collaborate with peers to revise and edit their work and then publish their work digitally following district guidelines.

EXEMPLAR STUDENT RESPONSE

Writing Task:

All of the four types of volcanoes can change Earth's surface in many ways. They also destroy plants, animals, and towns. Sometimes volcanoes can even kill people.

In Volcanoes, Mr. Simon tells us that some kinds of volcanoes erupt with a huge explosion of cinders and ashes. Then when they calm down a little, lava begins flowing out, and it covers the cinders and ashes. This means that all around the volcano changes as soon as the eruption starts. Sometimes, lava comes out slowly and it cools as it rolls down the slopes of the volcanoes. This cooling and hardening lava changes the shape of the volcano dome in a very short time. If the volcano stops up, pressure can build up. When it explodes like ten tons of dynamite, it spouts huge rocks around the volcano vent. The second explosion of rocks causes more sudden changes to the land around the volcano. Depending on the type of lava and the energy of the explosion, surrounding land can be covered in sharp rocks or have smooth, billowy rocks. There wouldn't be any plants or trees either.

Because some lava is thin and fast-moving, many animals and people living near the volcanic eruption don't move to safety in time. Plants and trees around the volcano explosions are covered with cinders and ashes, burned, and killed too. For a while, there are no plants, animals, and people living around the volcano.

In a few months after an eruption, plants begin growing in the cracks of the hardened larva and rocks. Animals and people often return to live near the volcanoes again. When people return, they will find new mountains and new soil.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 29	Stratovolcanoes are one kind of volcano. How are stratovolcanoes formed? Is this a quick or slow process? How do you know?	Stratovolcanoes are formed by the lava, cinders, and ash from many eruptions. This must be a slow change, because I see in the picture that this mountain is very tall. It must take many, many years to stack up so many layers of lava, cinders, and ash.
Page 31	What does extinct mean? Therefore, what is an extinct volcano?	Extinct means something is dead or doesn't live anymore. An extinct volcano is very old and doesn't erupt again.
Page 31	What is the difference between a dormant volcano and an active volcano?	Now I know volcanoes are different. A dormant volcano is sleeping or is just sitting doing nothing. Sometimes, volcanoes can be dormant for a long, long time. Then is becomes active. An active volcano means that it's not asleep, and changes are happening within the volcano. An active volcano is the opposite of an extinct volcano.
Page 31	What is a crater? How is a crater lake formed?	Craters are big holes in the Earth. Craters, or calderas, can be caused when the entire top of a volcano crashes inward. An eruption causes the mountaintop to fall in. Sometimes it is fills with water and looks like a big lake.
Page 31	In the text it says, "plants and animals are nowhere to be found." Why is that? How do those volcanoes affect people, plants, and animals?	Plants, animals, and people die or leave. People leave because their homes, towns, and property can be covered in cinders, ashes, and lava. Plants are killed by hot lava and tons of rocks but grow back in a few months. Animals that aren't killed have to leave because their food and homes are destroyed.

Page 32 and all text and pictures	Using what you know about different kinds of volcanoes and lava, what affects do volcanic eruptions have on Earth?	Eruptions can cause the top of volcanoes to collapse and make craters. That means a lake could end up where a mountain used to be! Also, the land can be covered in sharp or billowy rocks, cinders, and ashes. Islands can form in the middle of the ocean.

ADDITIONAL SUPPORTS
Reread related selections from the anchor text *Plant Earth Inside Out* by Gail Gibbons. Build background knowledge with the following YouTube video: https://www.youtube.com/watch?v=V863xR0Y2qk

DAY 6: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *How Does It Happen? How does a Volcano become an Island?* By Linda Tagliaferro **Iteration:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
860L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is very complex. There are numerous text features (table of contents, photographs, diagrams, captions, bold words, headings, glossary) that support students in navigating the text. The diagrams and illustrations are integral to understanding the text.	Language features are moderately complex. There are numerous domain-specific words that may be new to students, though many of them are defined in the text or in the glossary (crust, tectonic plates, magma, eruption, active, fertile, dormant). Most of the sentences are simple sentences, but there are also compound and complex sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is slightly to moderately complex. It is conveyed clearly in the title: to explain how a volcano becomes an island. The ideas are explicitly stated and are easy to identify.	**Slightly Complex** There are slightly complex knowledge demands in this text. To fully understand the text, students will need to have some background knowledge about Earth's features (sea level, ocean floor). However, most of the knowledge students need to access the text is available within the book.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
The desired understanding for the first part of the text is that volcanoes differ from each other in a variety of ways. Specifically, volcanoes can be found all over Earth: on land and in the ocean. Volcanoes can be active or dormant. Volcanoes are formed in different ways, have different shapes, and change at different speeds.

DAILY TASK
Writing Task: Have students complete a writing assignment with these instructions: How can volcanoes differ? Using knowledge from the previous text and after reading the first half of this text write a paragraph to answer the question. Use evidence from the text to support your response. Come up with three ways volcanoes differ from each other. Be sure to include an introduction and conclusion statement. When you are finished, share your answer with your partner. Ask your partner questions if there is anything you don't understand. If your partner has an idea you didn't have, go back and add that idea to your writing.

EXEMPLAR STUDENT RESPONSE
Writing Task: Volcanoes can differ from each other in a variety of ways. First, volcanoes can erupt with different speeds. Sometimes the eruptions can be fast and violent. Other times, the eruption can be quiet and slow. Second, volcanoes differ by where they are. Volcanoes don't just occur on land. Many can also be found on the bottom of the ocean. Volcanoes can be found in many places on Earth. Third, volcanoes differ in how often they erupt. Some volcanoes are active, meaning they erupt frequently, and some are dormant, meaning they have not erupted in a long time. These are just some of the ways volcanoes differ.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 4	What do you remember from our previous text about the layers of the earth? What do you remember about magma?	*Possible responses:* • There is an inner core and an outer core. • It is rock formed by lava that cools.
Page 4	What is the difference between a	The outside of a volcano can look just like a quiet mountain that seems to never

	mountain and a volcano?	change. The difference between a mountain and a volcano is that in a volcano, the magma is hiding inside it until the volcano begins to erupt.
Page 4	How do volcanoes erupt in different ways?	Some volcanoes explode violently and shoot lava, gases, and ashes far into the sky. Other times, volcanoes just ooze slowly and quietly while the lava burns a path down the side of the mountain.
Page 5	Why might underwater islands go unnoticed for a long time? Describe how Iceland was formed. How long does it take for a volcano to make an island? What does it mean to be an active volcano?	Underwater islands may go unnoticed for a long time because they are under the water. They have not yet risen above sea level. Iceland was mostly formed from volcanoes under the water that erupted over time. It takes a long time for a volcano to become an island. I know this because in the text it says, "if an underwater volcano keeps erupting over and over for millions of years, its peaks can eventually poke out of the water." An active volcano is still capable of erupting.
Page 7	What do you see in the picture? Where do the gasses and lava come from?	In the picture I see bubbles from gasses that are oozing out of earth's crust. The gasses come from the mantle, below earth's crust.
Page 8	Pretend your hands are plates, and show one of them sliding over the other. Now show your hands colliding with each other. Now show your hands moving away from each other. What do you see in the picture? What does that tell you about the tectonic plates in this area of the world?	I see a crack. This tells me the plates are moving away from each other.
Page 10	What makes the "mound of lava grow?" Does the mound of lava grow quickly or	Magma flows on top of hard lava and builds up slowly into the shape of a mountain. The text says, "After millions of

	slowly over time? How do you know?	years, the growing pile of hardened lava builds up into the shape of a mountain."
Page 12	What is the difference between an active volcano and a dormant volcano? (Note: *In the previous text, students heard the word 'extinct' for a volcano that will never erupt again*.) Discuss with a partner and be prepared to share your thinking with the class. How are the different kinds of volcanoes unique? Provide examples from the information in the text.	An active volcano erupts, and a dormant volcano doesn't erupt for a long time. The different kinds of volcanoes are unique because of (1) how they look, and (2) how they form. For example, a shield volcano has sloping sides that form from slow lava flowing out of the earth. Composite cones, on the other hand, have steep sides formed by violent eruptions of lava.

DAY 7: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *How Does It Happen? How does a Volcano become an Island?* By Linda Tagliaferro **Iteration:** Second Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
860L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is very complex. There are numerous text features (table of contents, photographs, diagrams, captions, bold words, headings, glossary) that support students in navigating the text. The diagrams and illustrations are integral to understanding the text.	Language features are moderately complex. There are numerous domain-specific words that may be new to students, though many of them are defined in the text or in the glossary (crust, tectonic plates, magma, eruption, active, fertile, dormant). Most of the sentences are simple sentences, but there are also compound and complex sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is slightly to moderately complex. It is conveyed clearly in the title: to explain how a volcano becomes an island. The ideas are explicitly stated and are easy to identify.	**Slightly Complex** There are slightly complex knowledge demands in this text. To fully understand the text, students will need to have some background knowledge about Earth's features (sea level, ocean floor). However, most of the knowledge students need to access the text is available within the book.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH

Read pages 14–29 on Day 2.

The purpose for reading this part of the text is for students to understand how volcanoes impact plants, animals, people, and the earth's surface.

DAILY TASK

Writing Task:

In a paragraph, describe how volcanoes impact plants, animals, people, and the earth's surface. Be sure to include the following in your response:

- An introductory statement
- Facts and details from the text about how volcanoes impact plants
- Facts and details from the text about how volcanoes impact animals
- Facts and details from the text about how volcanoes impact the earth's surface
- A concluding statement

EXEMPLAR STUDENT RESPONSE

Writing Task:

Volcanoes impact plants, animals, and people in many ways. Over time, a new island becomes a home to plants and animals. This happens when birds fly to the island and when ocean currents carry plants and animals to the shore of the island. If the soil on the island is fertile, plants and seeds will begin to take root and grow. Volcanoes can also impact people, because people who live close to an active volcano can die when houses or buildings are destroyed. Volcanoes also impact the earth's surface by adding new material to islands.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 14	What does the map show us? Why is it called the ring of fire?	The map shows the ring of fire. It is called the ring of fire because there are a lot of volcanoes there, and it kind of looks like a circle, or a ring.

Page 15	How might an eruption of Mount Merapi affect people who live nearby?	If they are not warned in time, they could die.
Page 16	How was the Hawaiian island of Kauai formed?	A hot spot began shooting up molten lava. It formed an underwater volcano that reached the water's surface over time.
Page 17	How does Kilauea change the earth's surface?	Kilauea is still an active volcano. As it continues to erupt, more and more lava spurts out. As it cools, more land is added to the island.
Page 18	How does the author describe a new island? What does that tell you about the plants, animals, and people on the island?	The author uses the adjectives empty and lonely to describe the new island. This tells me there are no plants, animals, or people on the island.
Page 18	What does waste mean in this context? How do birds impact the landscape of the island?	Birds fly over or land on new islands as they migrate. Seeds are left on the island in their waste. These seeds grow into plants that were recently eaten from on nearby land. Eventually, a large variety of plants would end up on the island.
Page 19	Describe how a coconut might end up becoming a seedling on a different island?	If a coconut falls from a palm tree into the ocean, it can float for many miles. If the coconut lands in the right kind of soil on another island, it will take root and grow.
Page 21	How do volcanoes impact plants and animals? Give some examples from the text.	Volcanoes can provide a new place for plants and animals to live. For example, Albatross only lay their eggs on the Galapagos islands, which were created by volcanoes.
Page 22	What might happen to Surtsey in the next 100 years? How might that happen?	It might disappear. The wind and rain could slowly wear away the island.
Page 23-24	What does fertile soil mean?	Fertile soil means that the soil has what it needs for things to grow.

	Talk with a partner. Based on these two pages, how do volcanoes impact plants, animals, people, and the earth's surface? Did this happen quickly or slowly?	Volcanic islands and their rich soil slowly become homes for different kinds of plants and animals. However, volcanoes can also destroy lives suddenly when ocean water heats up and sending very hot waves to beaches close by.
Page 27	How do underwater smokers impact sea animals?	Underwater smokers provide minerals needed for plants and animals to grow such as strange worms and giant clams.

DAY 8: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *An Island Grows* by Lola M. Schaefer **Iteration:** First Read **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
150L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure is slightly complex. There are few words per page. The spacing and placement of the text on the page supports the reader in following along. The illustrations directly support the text.	Language features are moderately complex. Most of the vocabulary is explicit, though there are some words that may be unfamiliar to students or may be used in new ways (quake, sheer, batters, sow, thrive, plot, dock, flock, settlers, tilled, merchants, root). The sentences cross pages at times. Most of the sentences are simple sentences, though there are a few complex sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose is slightly complex. The story is about an island growing in the middle of the ocean. This meaning is obvious and is revealed in the title of the text.	Knowledge demands are moderately complex. To fully access the text, students need to have background knowledge about how volcanoes form and about how new life comes to islands. Though these are not abstract ideas, they may be new for students.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH

Volcanic islands evolve over time into a place suitable for supporting life.

(If time allows, this shared reading text may be included along with the Day 2 read aloud of *How Does a Volcano Become an Island*?)

DAILY TASK

Writing Task:

In writing, describe how the information in the book (*An Island Grows*) is similar and different from the book we just read (*How Does a Volcano Become an Island*)? Be sure to include at least one way the texts are similar and at least one way the texts are different. Also, include an introduction and a concluding sentence.

EXEMPLAR STUDENT RESPONSE

Writing Task:

An Island Grows and How Does a Volcano Become An Island have both similarities and differences. An Island Grows tells the story of the life cycle of an island. How Does a Volcano Become an Island? includes many facts and photographs about how islands are formed. Both books provide information about how an underwater eruption causes islands to form. One thing that is different between these two texts is that An Island Grows shows how islands are discovered and people begin to settle there. The island becomes a busy place. Though the two books are written in different formats, the topics are similar.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Volcano blows. *An Island Grows.*	What is happening at this point in the story? Based on what we have read in previous texts, what do you expect to happen? Based on what you have read in other texts, what is causing the island to grow?	An underwater volcano is erupting. Lava will pour out and start creating an underwater mountain. When the lava dries, it builds up over time, creating an underwater mountain.
Roots grow. Leaves show.	What is happening on the island? How did the plants get there?	Plants are growing on the island. The wind blew the seeds to the island.
Trees tower. Vines flower. Insects thrive. Birds arrive.	What is happening now on the island?	Plants are growing and animals are coming to the island.
Soil is tilled.	How is the island changing throughout the story?	The island changes from empty, rocky land to a busy place full of life. There are now people on the island, and they are growing plants to eat.
Where only water used to be.	How did the island get to be there if it used to only be water?	An underwater volcano built up over time until it rose above sea level.
	What is the significance of the last line of the text?	The last line of the text reminds us that the islands will continue to appear as long as volcanoes erupt in the ocean.

DAY 9: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Earthquakes* by Franklyn M Branley **Iteration:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
750L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is slightly complex. There are few text features for students to navigate. There are bolded words, but there is no glossary. Some of the graphics support the text, though there are ideas presented in the text that are not, and do not need to be, supported with illustrations.	Language features are moderately complex. There are subject-specific words, some of which are bolded and defined in the text (magnitude, fault, tectonic plates, natural, afire, dams, steel, satellites, shocks, experiment, yardstick, buckle). There are some words that may be new to students or may be used in a new way (topple, withstand, fortunately). Most of the sentences are simple, though there are complex and compound sentences as well.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is only slightly complex. The text focuses on earthquakes (what they are and what impact they can have). The purpose is easy to grasp from the title and text.	Knowledge demands are moderately complex. Many of the examples call for students to know about parts of the world or specific natural/manmade features (Mexico, California, Pacific Ocean, Japan, southern Europe, Mount Vesuvius, Indian ocean, San Francisco, Golden Gate bridge). Students also need to have a basic understanding of natural occurrences such as floods, landslides, and volcanoes.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
The purpose of this read-through of the text is for students to develop an understanding of what causes earthquakes. Students will also come to understand that earthquakes cause fast changes to the earth's surface.

DAILY TASK
Writing Task: Draw a picture that shows what happens to the earth's crust during an earthquake. Then write a paragraph explaining what causes earthquakes. Remember to include an introductory sentence, facts from the text, and a conclusion. When you are finished, share your writing and illustration with a partner. Give your partner feedback if they have any incorrect information.

EXEMPLAR STUDENT RESPONSE
Writing Task:  Earthquakes happen when the Earth moves too much at one of its fault lines. Earthquakes are an example of one of Earth's quick changes. An Earthquake is caused when there is a sudden slip on a fault. The tectonic plates are always slowly moving, but they get stuck at their edges due to friction. When the stress on the edge overcomes the friction, there is an earthquake that releases energy in waves that travel through the earth's crust and cause the shaking that we feel.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 5	On page 5, the author states that the earth is always moving. What reasons does the text give us as to why we do not feel these movements? According to the author, do earthquakes happen often or not often? How do you know? Are earthquakes an example of a slow or	The earth's movements cannot be felt, because they are so small and slow. Earthquakes happen often in some places that are close to the fault lines in the Earth.

	fast change? How do you know?	Earthquakes are an example of a fast change because the author states they happen suddenly.
Page 8	How does the illustration on page 8 show us what happens to the earth's layers during an earthquake? In your answer, try to use a word we have learned in a previous text.	The earth's layers (plates, crust) shift up or down or sideways during an earthquake.
Page 13	The illustration on page 13 shows us the layers of the Earth. How is this illustration similar to what you learned in the *Planet Earth* book?	It is similar, because it shows the crust, the mantle, the molten outer core, and the inner core.
Page 14	What causes earthquakes to happen? (*Support: Provide the definition of 'buckle' in this context.*) Is this a fast change or a slow change? What is the key word in this sentence that tells us this is a fast change? (If needed, reread specific parts of this page: "When the sections cannot pass, the ground bends and buckles. Suddenly the bend releases, and a whole section may move four or five feet at once.") (*Make sure students Think-Pair-Share this concept.*)	An earthquake happens when the Earth's layers (plates, crust) shift up or down or sideways. This is a fast change. The book said, "Suddenly the bend releases, and a whole section may move four or five feet at once." The key word in this sentence is "suddenly."
Page 17	What caused the earthquake in San Francisco?	The earthquake in San Francisco was caused when one of the tectonic plates, or the crust, near the San Andreas Fault moved.
Page 18	Why do most earthquakes occur along the shore of the Pacific Ocean?	Most earthquakes occur along the shore of the Pacific Ocean because that is where the crust moves a lot, and we know earthquakes form where the crust moves.
Page 24-25	What do these illustrations show us happens during an earthquake? Do the illustrations give us any information about what causes earthquakes? Why might those things happen during an	During an earthquake, fires can start in houses, flooding can happen, telephone poles and trees can fall, and pipes underground can break. These things happen because the ground

	earthquake?	moves during an earthquake.
Page 30	Why would it be important to have these types of supplies ready if you lived in an earthquake zone?	It would be important to have a plan because earthquakes happen very quickly, and you might not have time to get away from it. You will also need supplies after it happens because you might not be able to drive anywhere to get them due to the destruction the earthquake has caused.
Page 31	Talk with a partner about the following question: Why will we "continue to have earthquakes?"	We will continue to have earthquakes because the Earth is always moving and changing. Humans have no way to stop the natural processes of the cycles of the Earth.

DAY 10: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Earthquakes* by Franklyn M Branley **Iteration:** Second Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
750L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is slightly complex. There are few text features for students to navigate. There are bolded words, but there is no glossary. Some of the graphics support the text, though there are ideas presented in the text that are not, and do not need to be, supported with illustrations.	Language features are moderately complex. There are subject-specific words, some of which are bolded and defined in the text (magnitude, fault, tectonic plates, natural, afire, dams, steel, satellites, shocks, experiment, yardstick, buckle). There are some words that may be new to students or may be used in a new way (topple, withstand, fortunately). Most of the sentences are simple, though there are complex and compound sentences as well.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is only slightly complex. The text focuses on earthquakes (what they are and what impact they can have). The purpose is easy to grasp from the title and text.	Knowledge demands are moderately complex. Many of the examples call for students to know about parts of the world or specific natural/manmade features (Mexico, California, Pacific Ocean, Japan, southern Europe, Mount Vesuvius, Indian ocean, San Francisco, Golden Gate bridge). Students also need to have a basic understanding of natural occurrences such as floods, landslides, and volcanoes.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH

The purpose of reading the book a second time is to help students build knowledge about how earthquakes impact people and places. This read-through will also reinforce the idea that earthquakes cause quick changes to the Earth's surface.

DAILY TASK

Writing Task:

With a partner, brainstorm as many ways earthquakes affect people and places.

Write a letter to a friend about some of the changes that can happen due to an earthquake. Include at least four ways earthquakes impact people and places. Also, include information about whether these changes are fast or slow.

**Teacher Note: This would be a good place to scaffold student's learning of the letter writing process if they have not been exposed to it previously.*

EXEMPLAR STUDENT RESPONSE

Writing Task:

Dear Friend,

I wanted to share some exciting information with you that I learned in school today. Did you know earthquakes are happening around the world all of the time, yet most of them we can barely feel? Here are some other important things I learned today.

Earthquakes can cause large cities to be destroyed. They can cause lakes or rivers to be moved. They can also cause trees and houses to be destroyed. When the plates move under water, they can cause large waves such as tsunamis which could drown out entire villages.

Earthquakes can be so scary! They are acts of nature that are very devastating and happen very quickly. I will write you more when I learn some new facts to share!

Your friend,

Student Name

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 7	What is the difference between a magnitude 2 earthquake and a magnitude 7 earthquake? What do you see in the picture? What does that tell you about the impact of earthquakes?	A 2 is hardly noticeable, where a 7 or above can cause extensive damage to buildings and can be felt in large regions. I see a crack in the earth, houses breaking, and people running around. This tells me earthquakes not only change the earth's surface, but also impact houses.
Page 15	Was this a large earthquake or a small earthquake? How do you know?	This was a large earthquake. I know this because this earthquake caused buildings to fall down. (This earthquake measured 8.1 on the Richter scale.)
Page 17	Using information from the text and the illustration, what impact did this earthquake have on people and places?	People had to leave because their homes and buildings were destroyed. There were broken water and power lines that caused dangerous situations.
Page 18	The author states that earthquakes often happen around volcanos. Why might this be?	Earthquakes might happen around volcanos because the earth inside is already moving from the molten lava causing pressure on the ground around it.
Page 20-21	What is a tsunami? Using information from the text and the picture, what was the impact of the undersea earthquake in 2004? Would these huge waves cause slow or fast changes to land?	Tsunamis are waves that grow into great walls of water. The picture shows they destroyed buildings and trees and caused people to have to leave. They would cause very fast changes because they happen so quickly, people would not have time to prepare for them.
Page 24-25	Looking at these pages, describe how an earthquake might change the surface of the earth or impact people and places.	Earthquakes can cause lakes to move, trees to fall, mountains or hills where there were none before, and also deep crevices in the ground.
Page 26	What are some ways people are trying to prevent the impact of earthquakes?	Some things people are doing to prevent the impact of earthquakes are: buildings are built to be able to withstand the movement of the ground. Bridges and

		dams are reinforced with concrete and extra steel.
Page 29	What are some ways people can protect themselves from the effects of earthquakes? How do those things help?	People can protect themselves by getting under strong tables, keeping away from windows or standing in a doorway. The book also says it is safer to stay inside the building rather than try to get out.

DAY 11: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Cracking Up: A Story About Erosion* by Jacqui Bailey and Matthew Lilly **Iteration:** First Read **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
650L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The text structure is moderately complex. Text features include words called out in different locations on the page, or in boxes, or in panes with pictures. The different colored boxes contain information about key terms or concepts that support an understanding of the main portions of text. Some of the illustrations are supplementary and some are necessary to understating the text.	Language features are moderately complex. There are many words that may be used differently than students are used to (face, droppings, baked, groove, base, lashed, wave, ground, wore, hung, foot, grain). Some of the subject-specific words (ledge, seabed, churning, surge, tide, dissolve, bay, shore) are defined in the text, and some aren't. There are some complex and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is moderately complex. The purpose of the text is hinted at in the title and on page 6. The text is narrowly focused on the impact of erosion.	Knowledge demands are moderately complex. Students will need to have a basic understanding of landforms. In addition, there are a few references to historical events that may help students understand the age of a landform, though understanding this reference in depth is not critical to understanding the text. To understand the last page of the text, students need to know what happens to a sandcastle when the tide comes in.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
For the first read of this text, students will understand what erosion is and be able to give examples of erosion.

DAILY TASK
Writing Task: Respond to the following question in writing: What is erosion? Choose at least one example of erosion from the text, draw a picture, and write about it. Be sure to introduce the topic of erosion, use facts from the book to explain, and provide a concluding statement.

EXEMPLAR STUDENT RESPONSE
Writing Task: Erosion is the name scientists give to the way water, ice, wind, and sun wear away at the Earth's surface and change the shape of the land. One example the author gives of erosion is crashing waves. This happens by waves crashing against a cliff and undercutting it. Erosion is a way our Earth changes.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 7	How does the information on this page help you understand what is happening to the cliff?	Knowing about soil helps me understand that the roots clung to the rock through the soil and helped stop the soil from being eroded.
Page 8	What is the connection between freezing water and the cliff?	Water froze in cracks, which made the cracks wider in the cliff.
Page 9	I noticed that the authors have used the word erosion until this page. On this page, I heard the word eroded. Does anyone have any idea how those words are related? *If necessary, explain that erosion is an event (a noun) while eroded is an action (a verb).*	Heavy waves crashing against the cliff cause the cliff to be *eroded*. *Erosion* is what happens to the cliff when the water wears it away.
Pages 6-9	What examples has the author given us	Some examples of erosion given by the author so far are: birds pecked and

	for how erosion was occurring? (*Have students turn and talk to a partner. Then, solicit responses from several students until all examples are given.*)	scraped, winds rubbed the ledge, grass grew, water froze, and waves crashed.
Pages 6-9	Think about the examples the author has given us, and talk with a partner about what you think erosion might mean. (*Solicit several student definitions for erosion.*)	Erosion is the wearing away of the Earth. It is a way the Earth changes.
Page 10	Compare your definition for erosion with the author's explanation. What parts did you have the same? Tell your partner what parts you had the same as the author. (*Revise the class definition if needed to more closely match what is in the text.*)	Answers will vary depending on previous answers.
Pages 11-12	What are the ways the cliff was eroded? (*Have students turn and talk to a partner. Then solicit responses from several students until all examples are given.*)	The cliff was eroded by ice and rainwater wearing down mountains; rivers cutting deep valleys into the land; dusty winds scrubbing against rocks and boulders; ocean waves eroding the land's edges, and ledges splitting away.
Page 13	How is the cliff being eroded now? What does it mean that the underwater waves were eroding the cliff? (*Have students turn and talk to a partner. Then, solicit responses from several students until all examples are given.*)	The cliff is being eroded under the water. The waves under the water keep crashing against the cliff and causing part of it to be worn away.
Page 15	What happens to the cliff as a result of tides? How does it help us understand the erosion of the cliff? (Have students turn and talk to a partner. Then solicit responses from several students until all examples are given.)	Rocks from the cliff were made smaller by the tide. The information helps me understand that twice a day, the movement of the tides causes the water to lift up rocks and throw them against the cliff. This causes part of the cliff to erode.
NOTE: Stop at page 23 for this read.		

DAY 12: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Cracking Up: A Story About Erosion* by Jacqui Bailey and Matthew Lilly **Iteration:** Second Read **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
650L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The text structure is moderately complex. Text features include words called out in different locations on the page, or in boxes, or in panes with pictures. The different colored boxes contain information about key terms or concepts that support an understanding of the main portions of text. Some of the illustrations are supplementary and some are necessary to understating the text.	Language features are moderately complex. There are many words that may be used differently than students are used to (face, droppings, baked, groove, base, lashed, wave, ground, wore, hung, foot, grain). Some of the subject-specific words (ledge, seabed, churning, surge, tide, dissolve, bay, shore) are defined in the text, and some aren't. There are some complex and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is moderately complex. The purpose of the text is hinted at in the title and on page 6. The text is narrowly focused on the impact of erosion.	Knowledge demands are moderately complex. Students will need to have a basic understanding of landforms. In addition, there are a few references to historical events that may help students understand the age of a landform, though understanding this reference in depth is not critical to understanding the text. To understand the last page of the text, students need to know what happens to a sandcastle when the tide comes in.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
During the second read of the books, students will deepen their understanding of how wind, rain, and the ocean cause erosion.

DAILY TASK
Writing Task: In a paragraph that includes at least two examples and two vocabulary words from the text, explain different ways the cliff was eroded. Your answer should introduce the topic, use facts from the book to explain, and provide a concluding statement.

EXEMPLAR STUDENT RESPONSE
Writing Task: The book *Cracking Up* tells the story of a cliff being eroded. Many things cause the cliff to erode including waves, rain, and the wind. Waves lash against the cliff causing the cliff to break apart. Rain soaked into cracks and then froze. The freezing of the water made the cracks wider. Also, specks of rocks in the wind rub against the cliff wearing the cliff down. The erosion of the cliff causes the Earth to gradually change its shape.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
NOTE: *For this read of the story, read only the story of the cliff. Omit supplementary scientific information for this read. The cliff story has the white background in most cases, and is typically in square boxes; the scientific information has colored backgrounds and is in rounded shapes.*		
	What is erosion?	Erosion is the wearing away of the Earth. It is a way the Earth changes.
After page 3, skip to page 25.	Read *New for Old*. How do erosion and volcanoes both change the Earth? (*Have students turn and talk to a partner. Then, solicit a whole group response.*)	Erosion causes rocks to wear away, and volcanoes create new rocks.
End of Page 6	The author states, "From the very beginning, erosion was taking place on the cliff." Is erosion a quick change or a	Most of the time erosion is a slow change. The examples in the book show changes during different seasons. This helps me

	slow change? How do you know? (*Have students turn and talk to a partner. Then solicit a whole group response.*)	see that erosion takes place over time.
Page 7	What are specks? How do you know? How does wind cause erosion? (*If needed, discuss how sandpaper works.*)	Specks are very small pieces. Specks can be carried by the wind so they must be small. Specks erode by rubbing against things like sandpaper, which makes small pieces fall off.
Page 8	How is the rain changing the cliff? Is the rain erosion a quick change or a slow change? How do you know? (*Have students turn and talk to a partner. Then solicit a whole group response.*)	The rain makes cracks in the cliff wider when it freezes. Most of the time erosion is a slow change. The examples in the book show changes during four different seasons. This helps me see that erosion takes place over time.
Page 12	What does lashing mean? How does lashing cause erosion? (*Add the word lashing to the anchor chart.*)	Lashing means to hit hard against something. The waves lash against the cliff so hard that the cliff breaks into pieces.
Page 13	What does heaved mean? How do waves cause erosion? (*Add heaved to the anchor chart.*)	Heaved means to pick up and throw with great force. The water heaves pieces of the ledge against the cliff. This causes more erosion.
Page 13	What does surge mean? How does the surging water cause erosion? (*Add surging to the anchor chart.*)	Surge means moving forward. The underwater surge erodes the cliff by knocking rocks against the bottom of the cliff.
After Page 13	Explain the story of the cliff by naming and describing how wind, water, and rain cause erosion. (*Have students turn and talk to a partner. Then, solicit a whole group response.*)	Specks in the wind erode the cliff by rubbing against the cliff like sandpaper. The wind, rain, and waves lashed against the cliff, which resulted in pieces of the cliff falling.

		The water heaved pieces of rock, which eroded the cliff by throwing pieces of the rock against the cliff. The water surged and carried small rocks, which led to pieces of the cliff being carried away. The surge of water with specks of rocks lashed against the cliff, which eroded the cliff by the specks rubbing against the cliff like sandpaper.
Page 15	Which forces have caused the cliff to erode so far? (*Have students turn and talk to a partner. Then, solicit a whole group response.*)	The cliff has eroded by birds pecking and scraping, winds rubbing the ledge, water freezing, waves crashing, the ledge breaking away, and underwater waves eroding the cliff.
Page 16	What is happening to the pebbles?	What is happening to the pebbles? Water made the minerals in the rocks dissolve leaving holes.
Page 17	Is erosion talking a long time or short time? How do you know? (*Add gradually to the anchor chart.*)	Erosion usually does not happen quickly. Instead, it happens gradually. The word gradually lets me know that it isn't happening quickly.
Page 21	What happened to the part of the cliff that broke off early in the story? Where are the pieces of rock now?	The piece of the cliff became pebbles. The pebbles have moved closer to shore.
Page 23 "Because of erosion, the grains of sand were high above the ground like they were on the cliff – at least, until the next tide came in."	What does this mean? How is this an example of erosion? (If needed prompt student to explain what tides are and what happens when sand castles get wet.) (Have students turn and talk to a partner. Then, solicit a whole group response.)	All the sand grains were once part of the cliff. The little girl made a sand castle out of the grains of the cliff. Just like water eroded the cliff, the water is going to erode the sand castle.

DAY 13: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Rocks: The Hard Facts, Erosion and Weathering* by Willa Dee **Iteration:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
880L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The text structure is moderately complex. There is a table of contents to support readers with locating information. Each page has a heading. Bolded text draws the reader's attention to words that are defined in the glossary. Diagram labels support students in accessing the illustrations. Some of the diagrams and illustrations are necessary for understanding the text.	Language features are moderately complex. Most of the language is explicit and easy to understand. Many of the critical words are bolded in the text and are defined in the glossary or in the text. There are other content-specific words that are not defined in the text (coastlines, riverbank, canyons, pressure, acid, sandstone).
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is slightly complex: to learn about weathering and erosion. This is clearly conveyed through the title of the book and the table of contents.	Knowledge demands are slightly complex. Most of the knowledge students need to access the text is presented in the text. Students need to understand gravity to fully understand the text.

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
The purpose of the first read of this book is for students to gather new information about erosion while also considering how weathering and erosion cause the earth to change.

DAILY TASK
Writing Task: With a partner, revise your paragraph from the previous lesson to include at least two more examples of erosion. Then, explain what weathering is and how it causes the Earth to change, using details from the text to explain.

EXEMPLAR STUDENT RESPONSE
Writing Task: Erosion is the name scientists give to the way water, ice, wind, sun, and gravity move sediment to other places and change the shape of the land. One example of erosion is crashing waves. This happens by waves crashing against a cliff and undercutting it. Abrasion is another way that Earth is eroded. Abrasion is the rubbing of one object against another object. Gravity causes erosion by making object fall toward the Earth and rub against each other. Glaciers are an example. Weathering is natural forces wearing down rock and breaking it into smaller pieces called sediment. Water freezing in rock is an example because the water expands causing the rocks to crack. Erosion and weathering are ways our Earth changes.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Pages 4-5	In *Cracking Up,* we discussed the meaning of erosion. I notice this author adds a new word to define erosion. Did anyone catch the new word? (gravity) (Explain that gravity is the force that causes everything to fall to the center of the earth. It causes objects we drop to fall to the ground instead of floating. Ask: How might gravity cause erosion?)	Gravity causes objects to fall down and rub against other objects. This rubbing together causes erosion.
Pages 4-5	I notice a distinction in this book between weathering and erosion that the author of *Cracking Up* did not make. What is the distinction? (Reread the last 3 sentences on page 5, if needed.) (Think aloud through the Venn diagram.) I wonder if there are examples in *Cracking Up* that we would call weathering and not erosion. As we read about weathering, I	Weathering is the wearing down of rocks into sediment, and erosion is moving of the sediment.

	want you to consider this.	
Pages 6-7	How does weathering cause the Earth to change over time? What were some examples in *Cracking Up* that we might call weathering instead of erosion? (Have students turn and talk to a partner. Then, solicit a whole group response.)	Earth's natural forces break down rocks. In *Cracking Up*, water froze in the cracks of the cliff. The water expanded causing the cliff to crack.
Pages 8-9	How does oxidation cause the Earth to change over time? (Have students turn and talk to a partner. Then solicit a whole group response.)	Oxidation makes the rocks weak. Because the rocks become weak, they are easier to break down into sediment.
Page 10	How does gravity cause erosion? (Have students turn and talk to a partner. Then, solicit a whole group response.)	Gravity pulls rainwater down, carrying rock particles downward.
Page 11	How does erosion make the Earth change? (Have students turn and talk to a partner. Then solicit a whole group response.)	Erosion causes the sides of the rivers to erode making them wider and deeper.
Pages 12-13	I see a connection between *Cracking Up* and the section we just read. Did anyone catch the connection? (Note: If students have difficulty, reread the third and fourth sentences on page 12.)	In *Cracking Up,* we read about specks in the wind rubbing against the cliff. Abrasion is the word for when specks in the wind rub against the cliff.
Pages 14-15	Let's look at the word deposited. Can we tell what it means? How do you know? How is deposited connected to erosion?	Deposited means put down or set down. I can tell because it says the sediment is deposited in layers. When sediment is eroded, it is deposited.

Pages 16-17	How can erosion cause something to "build up"? (Have students turn and talk to a partner. Then, solicit a whole group response.)	The sediments eroded from one place are deposited somewhere else. The place where sediment is deposited is built up.
Pages 18-19	What are some examples of the Earth changing? How were the examples formed? (Have students turn and talk to a partner. Then, solicit a whole group response.)	The Landscape Arch and The Grand Canyon are examples of the Earth changing by erosion. The Landscape Arch was formed by the breaking down of rocks. The Grand Canyon was formed by the Colorado River.
Pages 18-21	The author uses the words natural disaster. What were some examples the author gives of natural disasters? Can you give a definition for natural disaster? How do natural disasters change the Earth's surface?	Some examples of natural disasters are landslides, mudslides, avalanches, hurricane, and flooding. A natural disaster is an event caused by nature. The event causes great damage. Natural disasters cause erosion which changes the way the Earth's surface looks.
Page 22	Explain the rock cycle to a partner. How is erosion part of the rock cycle? Why does the rock cycle never end? Does the Earth ever stop changing? How do you know? (Have students turn and talk to a partner. Then, solicit a whole group response.)	The rock cycle is weathering, causing the breakdown of rocks and erosion causing the rocks to be moved away. The rock cycle never ends, because there is constant weathering and erosion. No, the Earth is always changing. Erosion and weathering are always in a cycle so the Earth keeps changing.

ADDITIONAL SUPPORTS

Consider creating a chart of new information learned about erosion from this book.

Reread this selection from the anchor text *Plant Earth Inside Out* by Gail Gibbons: "The earth is always changing. Old mountains disappear. They are worn away by ice, rain, and flowing water."

Question: What is the word we have now learned in *Cracking Up* that means being worn away by ice, rain, and flowing water? (erosion)

DAY 14: QUESTION SEQUENCE AND DAILY TASK

TEXT
Text: *Planet Earth/Inside Out* by Gail Gibbons **Iteration:** Second Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
800L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is slightly complex. There are no headings to separate different topics in the text. Some of the illustrations are supplementary, and some are necessary for understanding the text.	Language features are moderately complex. There are some subject-specific words that are defined and then used frequently in the text (equator, magnetic field, mantle, molten, plate, faults). There are some words that may be new or used in new ways (iron, nickel, pressure, strain, buckles, collide, flat plains, depressions, climate, natural resources, abused). Most of the sentences are simple or complex.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is slightly to moderately complex. The title communicates one of the purposes of the text, and the idea that the earth is ever-changing is a big idea that is explicitly repeated throughout the book.	The knowledge demands in this text are slightly complex. Students need to have background knowledge of distance (inches, miles, feet) and temperature. The illustrations and sidebars connect the information in the text to common experiences (water boiling, size of a peach).

DESIRED UNDERSTANDINGS FOR THIS READ-THROUGH
This will be the second complete read of Planet Earth/Inside Out by Gail Gibbons. While the text has been revisited throughout the unit, it will be circled back to at this point to review all learning and to allow students to collect their learning for the End-of-Unit Task.

DAILY TASK

Graphic Organizer:

As we read, capture information from the text in your graphic organizer. After we read, work with a partner to add additional information to your chart that you learned throughout the unit. When you are finished, find another group and compare answers. Ask questions if you need clarification, and add to your chart if you hear something interesting.

EXEMPLAR STUDENT RESPONSE

Name: _____

This is a sample. Student responses will be written and will include information from all unit texts.

Our Changing Planet Earth

Please think about the all of the processes that change the Earth's surface that we have explored during our unit. List the features of the Earth's surface that we have explored in the first column, then determine if they were formed quickly or slowly in the second column. In the final column, list ways that these features of the Earth's surface can be formed. Remember to use your knowledge from all of the text's we have explored during this unit to help you complete this chart.

Feature of Earth's Surface	Fast or Slow Change?	How is this feature of the Earth's surface formed?
Mountains	Slow	• Mountains form when the Earth's crust folds and buckles • Etc.
Earthquakes	Fast	• Earthquakes happen when the plates of the Earth press against each other. • Scientists use tools to determine the strength of Earthquakes. • Scientists can predict where an Earthquake will happen but not when. • Etc.
Volcanoes	Fast	• Volcanoes form where Earth's plates collide. • Magma is molten rock that comes from the volcano. • Etc.
Islands	Slow	• Some islands are the tops of mountains that rise above the water. • Some islands are formed from volcanoes. • Etc.
Erosion	Slow	• Cliffs are created by erosion. • Etc.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 1	What is special about the planet Earth?	The Earth is the only planet that is just right for plants and animals to live.
Page 11	Let's review the layers of the Earth and what makes each layer special. What do you know about the earth's core? The mantle? The crust?	The inner core is solid because of the Earth's weight. The outer core moves slower around the inner core making electricity that creates our magnetic field. The mantle is thick and hot. Part of the mantle is molten rock. The crust is the thinnest layer. We live on the crust.
Page 14	Why do we call the Earth the living planet?	We call the Earth the living planet because the Earth's plates are in constant motion, and the earth's surface is always changing.
Page 17	We read a lot about earthquakes on these pages. Turn to your partner and discuss what causes an earthquake. Now pause and think about the impact earthquakes have on people, places, and things. Share with your partner how earthquakes impact people, places, and things.	The plates move along their faults causing vibrations. Sometimes the Earth buckles, breaks, and causes buildings to be damaged. *(Teachers should also hear responses that include information from other earthquake-based texts that are part of this unit.)*
Pages 18-19	How are volcanoes and earthquakes alike? What is the difference between an active, dormant, and extinct volcano? Thinking back to how earthquakes impact the Earth, how do volcanoes change and impact the Earth?	Both earthquakes and volcanoes form on the edges of the Earth's plates. Active volcanoes erupt often. Dormant volcanoes rest for a long time between eruptions. Extinct volcanoes will never erupt again. They cause people to move, they can cause fires, they smell bad, they crease islands, etc.
Pages 20-21	What happens when the Earth's plates move apart?	Magma from the mantle rises, cools, and becomes solid adding to the edges of the plates.

	What is unique about islands? Is this a fast or slow process?	Many islands are the tops of mountains that show above the top of the water. A slow process. *(Teachers should also hear responses that include information from other islands based texts that are part of this unit.)*
Page 22	How has the shape of the Earth changed over its lifetime?	Mountains, hills, plains, and valleys have formed over the Earth's lifetime. *(Teachers should also hear responses that include information from other texts that are part of this unit.)*
Page 27	How is the earth changing inside and out?	The Earth is beautiful and living on the outside. It changes as new structures are formed when its plates move on the inside. Weather can also change it from the outside. *(Teachers should also hear responses that include information from other texts in this unit.)*

DAY 15 AND 16: END-OF-UNIT TASK

END-OF-UNIT TASK

EARTH NEWS CENTRAL: WEBSITE FOR STUDENTS

A PICTURE OF MOUNTAINS NEAR MY HOME

Earth Never Changes

BY: NEVELL KNOW-IT-ALL

Earth Never Changes

By: Nevell Know-it-all

"The Earth never changes," exclaims my friend, Simple Simon the Scientist. He tells everyone the mountains have stayed the same since he was a little boy, therefore the other scientists must be wrong. As evidence, Simon has pictures of mountains near his home from when his parents moved there fifty years ago. When he looks at the same mountains now, they look the same!

Simple Simon the Scientist also describes events such as flooding, tornadoes, and volcanic eruptions as nature causing a problem for a few days, but not causing changes to the Earth. This smarty scientist says once the event is over, everything goes back to the same as it was before the big event.

As a know-it-all, I told Simon how I had heard that Earth can change in many ways and from many natural events. However, after seeing Simon's picture of the mountains behind his childhood home, I've decided Simple Simon is correct. I guess Earth really doesn't change.

Respectfully,

Nevell Know-It-All

Peaceful Creek

This beautiful creek is behind my home. It hasn't changed since I moved here ten years ago. We even had heavy rains this spring! Simon must be correct, Earth doesn't change.

Webmaster: Willy Webmaster

Contact:
Willy.Webmaster@Earthnews.com

Title of article: Earth Never Changes

You and some friends came across this website while researching the Earth. The website tells readers that Earth never changes. Write an informational letter to the webmaster to explain how the Earth changes and if those changes happen slowly or over a longer amount of time. You and your classmates will discuss your letter and your evidence from the text. Next, you will present your information to a neighboring class to teach them to check their sources carefully.

END-OF-UNIT TASK CONTINUED

Create a letter that:

- Explains to the webmaster why the earth changes
- Uses facts and details from unit texts to name and describe at least two processes that cause the Earth to change
- Be sure to include information about whether each process results in a quick change or a slow change to the Earth's surface over time.
- Be sure to include an introduction, facts and definitions from the texts to provide evidence, and a concluding statement.
- Use at least three words we have learned in our studies.

STUDENT RESPONSE

Dear Willie Webmaster,

My second grade class came across your website last week. I know from our studies that your article is false. Simple Simon the Scientist and Nevell Know-It-All are incorrect, because the Earth is always changing. Their evidence is false because some changes are fast and some are slow. Erosion can move soil and rock from one place to another gradually. These changes may take hundreds or thousands of years. One example of this is a cliff on the ocean being eroded by the lashing, heaving, and surging of water. Another example of a slow change is how mountains are made. Wind, ice, and water cause mountains to form over many years. Simon's family photograph would not show big changes over fifty years, but that doesn't mean the mountains don't change. An example of a quick change is an earthquake. An earthquake can cause a section of the Earth to buckle or break open. We have learned the Earth is always changing.

Sincerely,
Second Grade Student

APPENDIX A: UNIT PREPARATION PROTOCOL

Question 1: What will students learn during my unit?

Review the content goals for the unit, and identify the desired results for learners.	
• What are the concepts around which I will organize my unit (*universal concept, unit concept*)? • What will students come to understand through deep exploration of these concepts (*essential questions, enduring understandings*)?* • What disciplinary knowledge will focus instruction and provide the schema for students to organize and anchor new words (*guiding questions, disciplinary understandings*)? • Why is this content important for students to know? *Adapted from McTighe, J. & Seif, E. (2011), Wiggins, G. & McTighe (2013).	

Question 2: How will students demonstrate their learning at the end of my unit?

Review the end-of-unit task and the exemplar response to determine how students will demonstrate their learning.	
• How does the task integrate the grade-level standards for reading, writing, speaking and listening, and/or foundational literacy in service of deep understanding of the unit texts and concepts? • How does the task call for students to synthesize their learning across texts to demonstrate their understanding of the unit concept? • How does the task call for students to use appropriate details and elaborate on their thinking sufficiently? • How does the task prompt student thinking and writing that reflects the grade-level expectations? • What is the criteria for success on this task? What does an excellent response look/sound like?	

Question 3: How will students build knowledge and vocabulary over the course of the unit?

Read each of the texts for the unit, and consider how the texts are thoughtfully sequenced to build world and word knowledge.	
• How are the texts sequenced to build knowledge around the unit concepts? • How are the texts sequenced to support students in developing academic and domain-specific vocabulary? • Which instructional strategies are suggested for each text? How will I sequence them within the literacy block?	

Question 4: What makes the text complex?

You are now ready to prepare at the lesson level. To do this, revisit the individual text. Review the text complexity analysis and read the desired understandings for the read-through.	
• What aspects of this text (structure, features, meaning/purpose, knowledge) are the most complex? • What aspects of the text are most critical for students to comprehend to ensure they arrive at the desired understandings? • Where might you need to spend time and focus students' attention to ensure they comprehend the text?	

Question 5: How will I help students access complex texts?

Review the question sequence, and reflect on how the questions support students in accessing the text.	
• How does the question sequence support students in accessing the text and developing the desired understandings? • How does the question sequence attend to words, phrases, and sentences that will support students in building vocabulary and knowledge? • How are the questions skillfully sequenced to guide students to the desired understandings? • How will you ensure all students engage with the questions that are most essential to the objectives of the lesson? (Consider structures such as turn and talk, stop and jot, etc.) • How will you consider additional texts, or additional reads of the text, to ensure students fully access and deeply understand the text?	

Question 6: How will students demonstrate their learning at the daily level?

Review the daily task for the lesson to determine what students will be able to do at the end of the lesson.	
• How does the task require students to demonstrate their new or refined understanding? • How does the task call for students to use appropriate details and elaborate on their thinking sufficiently? • How does the task prompt student thinking and writing that reflects the grade-level expectations? • How does this task build on prior learning in the unit/prepare students for success on the end-of-unit task? • What is the criteria for success on this task? What does an excellent response look/sound like?	

Question 7: What do my students already know and what are they already able to do?

Consider what your students already know and what they are already able to do to support productive engagement with the resources in the unit starter.	
• What knowledge do my students need to have prior to this unit? • What do my students already know? What are they already able to do? • Given this, which/what components of these texts might be challenging? Which/what components of these tasks might be challenging? • What supports will I plan for my for students (e.g., shifting to a different level of cognitive demand, adding or adjusting talking structures, adding or adjusting accountable talk stems into student discussions, providing specific academic feedback, or adding or adjusting scaffolded support)? • How can the questions and tasks provided in the unit starter inform adjustments to upcoming lessons?	

Question 8: What content do I need to brush up on before teaching this unit?

Determine what knowledge you as the teacher need to build before having students engaged with these resources.	
• What knowledge and understandings about the content do I need to build? • What action steps can I take to develop my knowledge? • What resources and support will I seek out?	

APPENDIX B: USEFUL PROCEDURAL EXAMPLES FOR EXPLICIT VOCABULARY INSTRUCTION

Example 1:

- Contextualize the word for its role in the text.
- Provide a student friendly definition, description, explanation, or example of the new term along with a nonlinguistic representation and a gesture.
- Provide additional examples, and ask students to provide their own examples of the word.
- Construct a picture, symbol, or graphic to represent the word.
- Engage students in lively ways to utilize the new word immediately.
- Provide multiple exposures to the word over time.

-Beck et al., 2002; Marzano, 2004

For a specific example, see the shared reading webinar presentation found here.

Example 2:

- Say the word; teach pronunciation.
- Class repeats the word.
- Display the word with a visual, read the word, and say the definition using a complete sentence.
- Have the class say the word and repeat the definition.
- Use the word in a sentence: the context of the sentence should be something students know and can connect with.
- Add a gesture to the definition, and repeat the definition with the gesture.
- Students repeat the definition with the gesture.
- Have student partners take turns teaching the word to each other and using the word in a sentence they create.
- Explain how the word will be used in the text, either by reading the sentence in which it appears or explaining the context in which it appears.

- Adapted from *50 Nifty Speaking and Listening Activities* by Judi Dodson

APPENDIX C: SUPPLEMENTAL MATERIALS

Daily Task and Question	Resource Description	Resource
Day 1	Example Graphic Organizer	Day 1 Example.docx
Day 1	Student Handout	Day 1 Student Handout.docx
Day 14	Exemplar Graphic Organizer	Day 14 Graphic Our Changing Planet Org
Day 14	Student Handout	Day 14 Our Changing Planet Gra
Day 15-16	End-of-Unit Rubric	Final Grade 2 End of Unit Rubric.docx